

## AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows:

Page 1, between lines 2 and 3, please insert the section header:

### **Field of the Invention**

Page 1, between lines 4 and 5, please insert the section header:

### **Background Information**

Page 3, between lines 20 and 21, please insert the section header:

### **Summary of the Invention**

Page 3, between lines 26 and 27, please insert the following paragraphs:

The present invention also provides a radically coupled polytetrafluoroethylene polymer powder comprising at least one of radiation-chemically and plasma-chemically modified polytetrafluoroethylene powder including a surface, and homopolymers, copolymers or terpolymers radically coupled on the surface via a reaction in dispersion or in substance.

The polytetrafluoroethylene powder can be radiation-chemically modified.

The polytetrafluoroethylene powder can be radiation-chemically modified with a radiation dose greater than 50 kGy.

The polytetrafluoroethylene powder can be radiation-chemically modified with a radiation dose greater than 100 kGy.

The polytetrafluoroethylene powder can be radiation-chemically modified in presence of reactants.

The polytetrafluoroethylene powder can be radiation-chemically modified under influence of oxygen.

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Styrene, acrylonitrile, maleic anhydride, acrylic acid, (meth-) methyl acrylate, vinyl acetate, glycidyl methacrylate, (meth-) acrylamide compounds or mixtures thereof can be added as polymerizable, olefinically unsaturated monomers.

The present invention also provides a method comprising at least one of radiation-chemically and plasma-chemically modified polytetrafluoroethylene powder including a surface, and homopolymers, copolymers or terpolymers radically coupled on the surface via a reaction in dispersion or in substance, comprising reactively converting polytetrafluoroethylene powder that is at least one of radiation-chemical and plasma-chemical modified and has reactive perfluoroalkyl-(peroxy) radical centers, in dispersion or substance with addition of polymerizable, olefinically unsaturated monomers, so that a polymer-forming reaction to homopolymers, copolymers or terpolymers on the polytetrafluoroethylene powder is obtained.

The polytetrafluoroethylene powder with reactive perfluoroalkyl-(peroxy) radical centers after at least one of radiation-chemical and plasma-chemical modification can be subjected to a tempering at low temperatures yielding the reactive perfluoroalkyl-(peroxy) radical centers.

The polytetrafluoroethylene powder can comprise radiation-chemically modified polytetrafluoroethylene powder.

The polytetrafluoroethylene powder can be radiation-chemically modified with a radiation dose greater than 50 kGy.

The polytetrafluoroethylene powder can be radiation-chemically modified with a radiation dose greater than 100 kGy.

The polytetrafluoroethylene powder can be radiation-chemically modified in presence of reactants.

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The polytetrafluoroethylene powder can be radiation-chemically modified under the influence of oxygen.

The polytetrafluoroethylene powder can be a micropowder.

The reaction can be performed in an autoclave or in a stirred tank or in an extruder/kneader.

Olefinically unsaturated monomers can comprise at least one of styrene, acrylonitrile, maleic anhydride, acrylic acid, (meth-)methyl acrylate, vinyl acetate, glycidyl methacrylate and (meth-)acrylamide compounds.

The olefinically unsaturated monomers can comprise a mixture of monomers.

The olefinically unsaturated monomers can comprise at least one of macromeres and oligomers.

The polytetrafluoroethylene polymer powder can include functional groups which in subsequent reactions can be reacted with other low-molecular, oligomeric and/or polymeric substances.

The powder can be incorporated in plastics/polymers.

The polytetrafluoroethylene polymer powder can be incorporated into at least one of elastomers, thermoplastics and thermosets.

Page 3, please delete the paragraph appearing at lines 27 and 28.

Page 4, before line 1, please insert the section header:

### **Detailed Description**

Page 8, between lines 20 and 21, please insert the section header:

### **Examples**